(ionic, thermal, etc.) the committee recommends the symbol α; for the ratio of specific heats the symbol γ; and for electrode potential, as for electromotive force, the symbol E. It may also be noted that the committee recommends that kation should always be spelt with a "k."

While the committee considered it to be inadvisable that any attempt should be made to compel authors to use the symbols which it recommends, it was of opinion that every means should be taken to encourage the use of these symbols, and it remains for the different official bodies concerned to consider how such encouragement can best be given.

Obituary.

Dr. J. A. Allen.

Mr. H. E. Anthony, associate curator of mammals in the American Museum of Natural History, New York, has sent us a detailed notice of the life and scientific work of Dr. J. A. Allen. Lack of space prevents us from publishing more than the following extracts referring to a few points of particular interest:—

Natural history has suffered a heavy loss by the death, on August 29 last, of Dr. Joel Asaph Allen at eighty-three years of age. Dr. Allen was best known for the work in mammalogy which he carried out as curator of ornithology and mammalogy in the American Museum of Natural History of New York City. However, his activities were manifold, and an insight into the truly remarkable amount of work accomplished by Dr. Allen may be gained from a glance at his bibliography, which in 1916 included the following: Papers on mammals, 271; on birds, 966; on reptiles, 5; on zoogeography, 9; on evolution, 22; on nomenclature, 35; on biography, 134; miscellaneous, 20; a total of no less than 1462 papers. Since the publication of this list other papers have appeared and a great deal of unpublished manuscript has been prepared for publication. One could not but be impressed by such a list as a mere feat of writing alone, but the workers in his field who consult the publications of Dr. Allen know that an infinite amount of patience, of painstaking application to tiring detail, and of well-balanced and judicious weighing of facts, is characteristic of his papers.

The bulk of Dr. Allen's papers deal with taxonomic questions, with the identification of collections and with the revision of groups. Many of the latter have become classical, and among the best-known might be mentioned the monographs on North American Rodentia, written in collaboration with Dr. Elliot Coues. Dr. Allen had marked capabilities for philosophical research into, and interpretation of, the phenomena of zoology, as is well shown by some of his earlier papers, but circumstances directed that he should expend his energies in other directions.

One of his youthful aspirations was for editorial work, and from 1874, when he edited his first "Proceedings of the Boston Society of Natural History," until 1918 he performed continuous service as editor of several scientific publications. For thirty-two years of this period he edited the Bulletin of the American Museum of Natural History, and for twenty-eight years the *Auk*.

Probably Dr. Allen is best known internationally through his authoritative position on zoological nomenclature. In this exacting field he was pre-eminent; internationally his worth was recognised by his position on the International Commissions since 1910.

Among the many honours which Dr. Allen received may be mentioned the Walker Grand Prize of the Boston Society of Natural History in 1903, and the medal of the Linnæan Society of New York in 1916; he was president of the American Ornithologists' Union, 1883–91, president of the Linnæan Society of New York, 1890–1897, member of the National Academy of Sciences, etc. He was also an honorary member of the British Ornithologists' Union, the Zoological Society of London, the Australian Ornithologists' Union, and the South African Ornithologists' Union.

The early part of Dr. Allen's life was spent in New England. That part of his academic training which had most influence upon his later life was his association with the great teacher, Louis Agassiz. Struggling under the handicap of a constitution at no time very strong, he made several notable collecting trips, the most important being that to Brazil in 1865. His first museum appointment was with the Museum of Comparative Zoology at Cambridge, Massachusetts, but in 1885 he took a curatorship in the American Museum of Natural History of New York City. Here his tenure was continuous until the time of his death.

Dr. Allen numbered among his friends practically all the well-known workers on birds and mammals, and the respect for his scientific attainments promptly grew into a love of the man himself whenever one was fortunate enough to be numbered among his personal friends.

W. A. Baillie-Grohman.

It is with much regret that we record the death of Mr. W. A. Baillie-Grohman, who passed away suddenly on November 27 at Schloss Matzen, in Tyrol, in his seventy-first year. A man of striking physique, endowed with high courage and great mind, he possessed an intense affection for the wild and grand in Nature, coupled, remarkably enough, with an unflagging interest in much that is purely scholarly. That such a man, the son of a sporting Austrian of large estate, should have developed in early youth what proved to be permanent tastes for hunting and mountaineering was perhaps inevitable, and in due course his adven-

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tures upon the mountains of Europe and North America gained for him a great reputation both as an intrepid climber and as a shooter of big game. But his claim to be remembered by naturalists rests upon a far more secure foundation, for many who achieve distinction in the fields indicated are, perhaps, best forgotten.

Most fortunately, Baillie-Grohman soon began to write about his favourite pursuits, and from 1875 onwards many books and innumerable articles in periodicals flowed from his pen. In these writings there is much of interest and importance to the naturalist, for the author was keen-sighted as well as judicious. His love of the chase led him to examine everything connected with its history, and with the utmost patience and industry he explored ancient books, pictures, tapestries, and mouldering heaps of medieval records in search of facts. The results of these researches are well seen in what is probably Baillie-Grohman's greatest book, "Sport in Art" (1913), which is, in effect, an admirable history of the chase as practised in the four centuries between 1400 and 1800. Of even greater interest are his two editions of "The Master of Game," written by Edward, second Duke of York (Shakespeare's "false Aumerle"), between 1406 and 1413. This work, comprising a translation of Gaston de Foix's "Livre de Chasse" (*circa* 1390), and five original chapters on English hunting, is the oldest book of hunting in our language, and as such must always make a special appeal to the student of British mammals.

By the death of MR. R. W. FRAZER, at sixty-seven years of age, India has lost a learned philologist and student of its literature and philosophy. Joining the Madras Civil Service in 1877, he was invalided in 1881 as the result of exposure on famine duties and service during a local disturbance in the Godavari Hills. On his retirement he became librarian of the London Institution, and it was by his initiative that it was absorbed by the School of Oriental Studies. Frazer lectured extensively on subjects connected with Southern India, and acquired a seldom-rivalled knowledge of Tamil and Telugu. He will be best remembered by his "British India" in the "Story of the Nations" series, his "Literary History of India," and "Indian Thought, Past and Present." He was for a short time secretary of the Royal Asiatic Society, succeeding Miss Hughes, who became his wife, and survives him.

Notes.

THE anniversary meeting of the Royal Society was held on St. Andrew's Day, November 30, and the following officers were elected:—*President:* Prof. C. S. Sherrington. *Treasurer:* Sir David Prain. *Secretaries:* Mr. W. B. Hardy and Mr. J. H. Jeans. *Foreign Secretary:* Sir Arthur Schuster. *Other Members of Council:* Sir Frederick Andrewes, Prof. V. H. Blackman, Sir William Bragg, Prof. A. W. Crossley, Dr. H. H. Dale, Prof. A. S. Eddington, Prof. A. Fowler, Prof. A. Harden, Prof. J. Graham Kerr, Prof. H. Lamb, Sir William Leishman, Sir Gerald Lenox Conyngham, Lord Rayleigh, Prof. O. W. Richardson, Sir Aubrey Strahan, and Prof. J. T. Wilson. Prof. Sherrington delivered the anniversary address, which is abridged on p. 470 of this issue, and presented the medals as follows:—The Copley Medal to Sir Joseph Larmor, who has long held a leading position in the British school of mathematical physics. It may fairly be said that his preliminary work was of the utmost value in paving the way to the modern developments of the theory of relativity. A Royal medal to Dr. Frederick Frost Blackman, distinguished for his contributions to plant physiology, and especially to knowledge of the process of photo-synthetic assimilation of carbon dioxide. A Royal medal to Sir Frank Dyson, who has devoted special attention to investigations of the movements and distances of the stars and of the bearing of these upon the structure of the stellar universe. It was mainly to his foresight and organising ability that we owe the successful observations of the deflection of light by the sun's gravitational field during the eclipse of 1919. The Davy medal to Prof. Phillipe Auguste Guye, in recognition of his work on optically active organic substances, on molecular association, and on atomic weights. The Hughes medal to Prof. Niels Bohr, the author of the conception to which the name "Bohr-atom" has been attached. This conception gave a solution of the long-standing puzzle of the Balmer series of hydrogen, and appears likely to provide a complete explanation of the spectra of the various elements.

AT the meeting of the Royal Geographical Society held on Monday, December 5, the president announced that it is hoped the members of the Mount Everest Expedition will have returned by the end of this week. Messrs. Raeburn and Mallory are already home, and Col. Howard Bury and Messrs. Wollaston and Bullock are on their way. The natural history collection and the photographic plates have also arrived, and the maps will be here within the next fortnight. It is satisfactory to find that the collections have reached home in excellent order. There is a plant belonging to the pink family from a height of 20,400 ft. above sea-level, and there are several kinds of primula—pale yellow, blue, and dark purple—and one with big hanging bells, and many gentians, a remarkable yellow *Pedicularis delphinium*, and some beautiful dwarf rhododendrons. One hundred and sixteen packets of seed in excellent condition are among the treasures which have reached the Royal Geographical Society, of which eighteen packets are of rhododendrons, twelve of primulas, eighteen of meconopsis, and four of gentians. From a height of 19,000 ft., the highest point from which seeds were obtained, is a packet of edelweiss. Then there is a sparrow from 18,500 ft.,

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